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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,664	01/20/2004	William F. Van Ostrand	60,246-313; 10,857	9865
26096	7590	05/02/2006	EXAMINER TANNER, HARRY B	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			ART UNIT 3744	
PAPER NUMBER				

DATE MAILED: 05/02/2006

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/760,664
Filing Date: January 20, 2004
Appellant(s): VAN OSTRAND ET AL.

MAILED
MAY 02 2006
Group 3700

Theodore W. Olds
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 17, 2006 appealing from the Office action mailed November 17, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,344,069	NARIKIYO	9-1994
5,829,674	VANOSTRAND et al	11-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4, 6-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narikiyo in view of Vanostrand et al. Narikiyo discloses the invention substantially as claimed. Narikiyo discloses a control of a HVAC system in which zone demand or load is determined by the difference between the temperature of a zone and the zone setpoint temperature (see col. 11, line 19-26) and the staging of the HVAC is controlled in response to the total load of all the zones (see col. 11, lines 44-53).

Vanostrand teaches that the use of proportional plus integral (PI) in order to determine zone demand is conventional (see col. 4, line 66 to col. 5, line 12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Narikiyo such that it included the use of proportional plus integral (PI) in order to determine zone demand in view of the teachings of Vanostrand. The specific number of time weighted damper positions used to calculate the average used for zone demand is considered to have been an obvious matter of engineering design based upon the responsiveness of the particular system. It is inherent that the sum of the demand of the zones will weight the zone with the greatest demand since it will have the greatest difference between set point and actual temperature.

(10) Response to Argument

At page 4 of the Brief appellant's contends that Narikiyo does not disclose calculating a staging demand signal of the HVAC system in response to the total load of all the zones of the system. Appellants have not previously argued that Narikiyo does not disclose calculating a staging demand signal. Narikiyo in fact does calculate a

staging demand signal based upon the total load of all the zones of the system as shown at blocks 301-306 of Figure 7 and blocks 401-404 of Figure 8. Furthermore, appellant admits that calculating a staging demand signal based is conventional. Narikiyo uses the temperature difference between the current room temperature of a zone and the zone set point temperature. VanOstrand was cited by the examiner as a teaching that using PI (proportional plus integral) to determine demand for a zone airflow control was conventional in the art.

At page 4 of the Brief appellant's contends that VanOstrand does not disclose using current and prior zone control signals to determine a demand signal. It is noted, however, that "proportional plus integral" control inherently requires the use of current and prior zone control signals in order to produce the integral portion of the demand signal. As pointed out in the Office Action of 10/17/2005, the specific number of past signals used in the integral is considered to be a matter engineering design based upon the desired responsiveness of the system.

At page 5 of the Brief appellant's contends that the references cited by the examiner do not disclose any formula for calculating the demand signals. It is noted that the formula recited in claims 3 and 12 reads on a simple sum of a set of current and prior control signals since x and y can be any positive number including one. A proportional plus integral means would in its simplest form consist of a sum of current and previous control signals and more likely would provide weighting to emphasize the more recent data.

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At page 5 of the Brief appellant's contends that Narikiyo does not calculate the system demand by weighting the zone having the greatest absolute difference between its set point and the actual temperature. It is noted that calculated thermal load for each zone of Narikiyo is proportional to the temperature difference between its set point and the actual temperature (see block 302 of Figure 7) and therefore the calculation of the staging demand signal based upon the sum of the all the zone loads inherently weights the zones with the greatest temperature difference.

For the above reasons, it is believed that the rejections should be sustained.

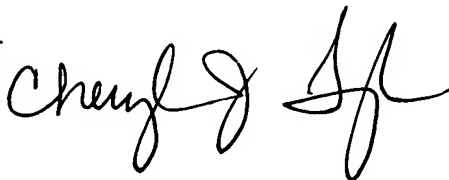
Respectfully submitted,

A handwritten signature in black ink, appearing to read "Harry B. Tanner".

Harry Tanner

Conferees:

Cheryl Tyler

A handwritten signature in black ink, appearing to read "Cheryl Tyler".

Marc Norman

A handwritten signature in black ink, appearing to read "Marc Norman".